

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027553**Date Inspected:** 07-May-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** jobsite**CWI Name:** Tony Sherwood**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS project**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and /or monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Orthotropic Box Girder (OBG) sections: This QA Inspector observed work and/or performed QA verifications at the locations noted below.

13E/14E-A1 thru A2.1: This QA Inspector observed ABF welding personnel Khit Lounechaney (#4985) performing Shielded Metal Arc Welding (SMAW) at this location. This QA Inspector randomly observed QC Inspector Tony Sherwood verify the following welding parameters; 140 amperes. This QA Inspector observed a 3.2 mm diameter E7018 electrode was being used. This QA Inspector reviewed Welding Procedure Specification (WPS) ABF-WPS-D15-1040C-CU Rev-0, being used by QC and observed the parameters were within the specified range for this size electrode. This QA Inspector used an electronic temperature gauge and verified the preheat temperature was above the minimum specified in the WPS. This QA Inspector observed the SMAW was being performed on each side of the joint preparation in a split root. The welding observed at this location appeared to comply with the contract requirements.

13E/14E-A0: This QA Inspector observed ABF welding personnel Eddie Brown (#9331) performing SMAW at this location. This QA Inspector randomly observed QC Inspector Tony Sherwood verify the following welding parameters; 260 amperes. This QA Inspector observed a 4.8 mm diameter E7018 electrode was being used. This

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QA Inspector reviewed ABF-WPS-D15-1040C-CU Rev-0, being used by QC and observed the parameters were within the specified range for this size electrode. This QA Inspector used an electronic temperature gauge and verified the preheat temperature was above the minimum specified in the WPS. This QA Inspector observed the SMAW was being performed after the root pass had been completed. The welding observed at this location appeared to comply with the contract requirements.

Drop In East Line-E2.3: This QA Inspector observed ABF welding personnel Jacob Stafford (#8020) performing SMAW at this location. This QA Inspector randomly observed QC Inspector Tony Sherwood verify the following welding parameters; 133 amperes. This QA Inspector observed a 3.2 mm diameter E7018 electrode was being used. This QA Inspector reviewed ABF-WPS-D15-1040C-CU Rev-0, being used by QC and observed the parameters were within the specified range for this size electrode. This QA Inspector used an electronic temperature gauge and verified the preheat temperature was above the minimum specified in the WPS. This QA Inspector observed the SMAW was being performed using a split root for the root passes. The welding observed at this location appeared to comply with the contract requirements.

PPE 121.6: This QA Inspector observed ABF welding personnel Mike Jiminez (#4621) performing SMAW at this location. This QA Inspector randomly observed QC Inspector Tony Sherwood verify the following welding parameters; 130 amperes. This QA Inspector observed a 3.2 mm diameter E7018 electrode was being used. This QA Inspector reviewed ABF-WPS-D15-1040C-CU Rev-0, being used by QC and observed the parameters were within the specified range for this size electrode. This QA Inspector used an electronic temperature gauge and verified the preheat temperature was above the minimum specified in the WPS. This QA Inspector observed a split root pass was being used. The welding observed at this location appeared to comply with the contract requirements. This QA Inspector observed later in the shift ABF welding personnel Mike Jiminez (#4621) was moved to Drop In East Line E2.5 to complete the root pass at this location. This QA Inspector observed the welding parameters appeared to remain the same.

PPE 122.2: This QA Inspector observed ABF welding personnel Kenneth Chappell (#3833) using the Submerged Arc Welding (SAW) process after the root pass and several additional passes of SMAW had been performed. This QA Inspector observed the induction heating blankets were being used to provide preheat. This QA Inspector randomly observed QC Inspector Tony Sherwood verify the following parameters; 555 amperes and 31.5 volts at a travel speed of 468 mm minute to produce a heat input value of 2.24 kj. This QA Inspector reviewed ABF-WPS-D15-4042B-1 Rev-0, being used by QC and observed the parameters appeared to be within the ranges specified. The welding at this location appeared to comply with the contract requirements.

### **Summary of Conversations:**

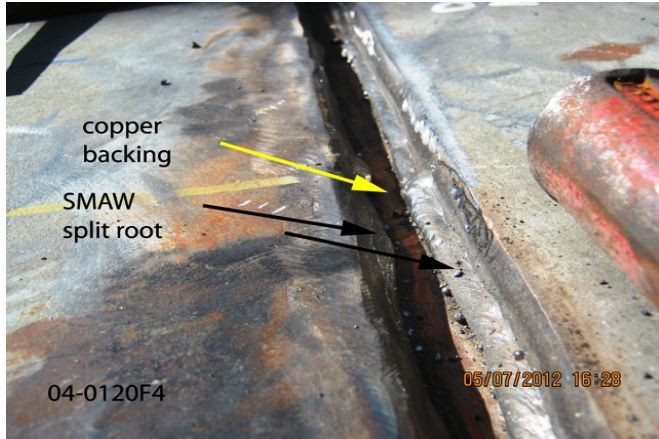
This QA Inspector had general conversations with American Bridge/Fluor (ABF) personnel, QC personnel and Caltrans personnel during the shift. Except as described above there were no notable conversations.

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### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Hager,Craig

Quality Assurance Inspector

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**Reviewed By:** Levell,Bill

QA Reviewer